DLA Chief Financial Officer's (CFO) Act
Inventory Valuation Statistical Sampling

5 February 2004

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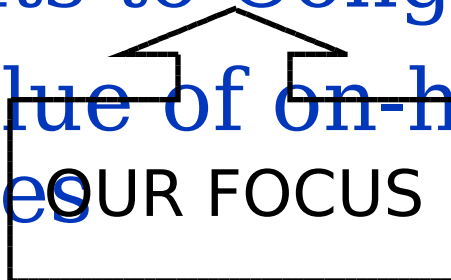
Briefing Outline

- Background
- History
- Sampling Approach
- Sampling Detail
- Proposed FY 2004 Sampling Plan

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- Chief Financial Officer's Act of 1990

- DoD Military Services, and Agencies provide financial statements to Congress
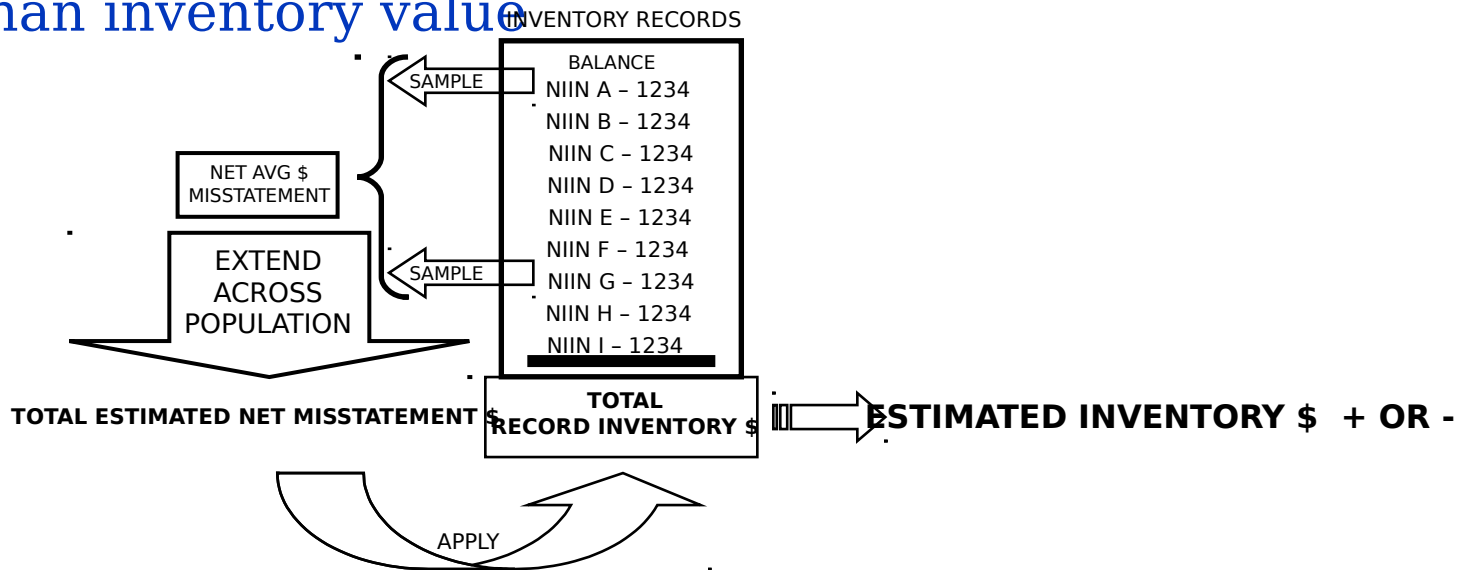
- Dollar value of on-hand supply inventories

OUR FOCUS

DLA Office of Operations Research and Resource Analysis

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History

- FY 1999 – DORRA developed inventory valuation sampling plan with assistance from DoD IG Quantitative Methods Division – monitored and reviewed by DoD IG audit team

- FY 2000 – "Lessons Learned" sampling plan – monitored and reviewed by DLA CFO Compliance Office independent auditor (D&T)

- FY 2001& 2002 – D&T sampling plan based on semi-annual DoD Inventory Record Accuracy sampling (DoD Joint Physical Inventory Working Group (JPIWG))

- FY 2004 – Return to FY 2000 sampling methodology

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- Sample for inventory record misstatement rather than inventory value

INVENTORY RECORDS

BALANCE

SAMPLE

NIIN A – 1234
NIIN B – 1234
NIIN C – 1234
NIIN D – 1234
NIIN E – 1234
NIIN F – 1234
NIIN G – 1234
NIIN H – 1234
NIIN I – 1234

NET AVG $ MISSTATEMENT

SAMPLE

EXTEND ACROSS POPULATION

TOTAL ESTIMATED NET MISSTATEMENT $

TOTAL RECORD INVENTORY $

ESTIMATED INVENTORY $ + OR -

APPLY

- Estimate total net inventory misstatement $
- Apply estimate to record inventory $

CFO Sampling Detail

- Two stage sampling frame
    - First stage sampling unit – inventory storage sites. Probability Proportional to Size (PPS) with replacement
    - Second stage sampling unit – DLA owned NIINS at selected storage sites. Stratified sample
- FY 2001 D&T changed the sampling plan by combining the financial sample with the DoD Inventory Record Accuracy Sample by adding sample to Strata A (unit price > $1000) - more efficient and reduced physical inventory effort

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Proposed FY 2004 Sampling Plan

- Keep accuracy and financial sampling separate
- Return to two stage PPS sampling with replacement
    - First stage – select sites (20) 94% of inventory value at DSS sites.
    - Second stage – select items (250 at each site).
    - Should satisfy D&T minimum sample size requirement

DEPOT	fac_id	# of items	extended value
Susquehanna	S2	616,982	$2,271,428,253
San Joaquin	J2	719,915	$2,202,274,115
Oklahoma City	OO	124,300	$846,929,986
Hill	O2	138,777	$490,806,368
Richmond	RV	314,168	$415,068,512
Norfolk	NV	162,975	$369,147,270
Warner Robbins	WG	137,317	$325,703,237
San Diego	DC	113,339	$291,872,169
Red River	RT	50,381	$201,326,631
Cherry Point	CN	29,866	$196,938,432
Jacksonville	JF	58,352	$193,176,261
Barstow	BC	35,974	$149,564,297
Columbus	CO	141,774	$141,543,713
Yokosuka	AL	69,310	$74,259,371
Albany	AG	18,137	$65,676,727
Corpus Christi	C1	11,371	$37,567,418
Anniston	AA	13,981	$32,914,258
Puget Sound	PW	21,709	$29,026,820
Pearl Harbor	AP	49,618	$26,011,614
Richmond - Cylinders	R1	389	$21,359,025
Germersheim	DE	28,538	$20,631,385
Tobyhanna	TP	4,723	$15,660,913
Guam	GU	12,819	$5,499,929
Sasebo	SA	5,226	$1,294,862
Pearl - Nuclear	NU	493	$165,325
Pearl - Ship Yard	SY	2	$0
			$8,425,846,890

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Proposed FY 2004 Sampling Plan

- New stratification scheme
  - 1. Measurable (JPIWG classification)
  - 2. Countable, unit cost < = $100, quantity < 100
  - 3. Countable, unit cost <= $100, quantity >= 100
  - 4. Countable, unit cost > $100 but < $1,000, quantity < 100
  - 5. Countable, unit cost > $100 but < $1,000, quantity >=100
  - 6. Countable, unit cost >= $1,000, quantity < 25
  - 7. Countable, unit cost >= $1,000, quantity >= 25 but < 125
  - 8. Countable, unit cost >= $1,000, quantity >= 125
- Neyman's Allocation with minimums
- Extrapolate average net misstatement, apply to book inventory value, compute error bounds at 95% CI

strata	# of items	extended value	item %	value %
1	76,065	$115,491,666	3%	1%
2	1,573,469	$511,762,392	55%	6%
3	386,125	$1,550,388,980	13%	18%
4	652,263	$1,788,038,615	23%	21%
5	15,202	$1,105,267,264	1%	13%
6	169,357	$2,132,812,119	6%	25%
7	7,313	$834,894,081	<1%	10%
8	642	$387,191,772	<1%	5%
	2,880,436	$8,425,846,890		

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Proposed FY 2004 Sampling Plan

- Data sources (automated systems):
  - Material Unit Acquisition Cost (MAUC) , Ownership / Purpose code (OPC), Standard Unit Price (SUP), "Odd RIC" assets - SAMMS, DISMS, BSM
  - Depot asset balances, SUP, Unit of Issue (UI), Manager RIC, Owner RIC
    - DSS – Global
    - DSS – QBS, QBO
  - Inventory results – MIS Inventory file
  - Roll forward/back – MIS Issue and Receipt files
- Timing
  - Draw data the last week of August 2004
  - Drop sample into DSS 2nd week of September 2004
  - Roll inventories forward to 30 Sep using MIS Receipt/Issue data
  - Complete and reconcile inventories first week of October 2004
  - Compile statistics by 18th of October 2004